



UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/323,628 06/01/99 KITCH

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EXAMINER

SORKIN, D

ART UNIT

PAPER NUMBER

1723

DATE MAILED:

09/13/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/323,628

Applicant(s)

KITOH, KENSHIN

Examiner

David L. Sorkin

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 5 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☒ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2-4, 8, 12 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 2-4, 8, 12 and 13 recites a broad recitation, followed by a narrower "preferable" limitation. It is unclear if the limitations following the word "preferably" are merely exemplary or required features of the claims.

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3. Also, in claims 2, 8, 12 and 13 it is unclear if the material of the tabs is required to be aluminum, copper or nickel.

4. Claims 16 and 17 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is lack of antecedent basis for "the side with no connection taking place with the electrodes". This claim is unclear as to what connection, if any, is being claimed.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

6. Claims 1-4, 7, 14-15, and 18-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Gauthier et al. (US 6,099,986).

7. Regarding claim 1, Gauthier ('986) discloses a lithium secondary battery comprising an internal electrode body including a positive electrode (55/68), a negative electrode (56/64), a separator (66), the positive electrode and the negative electrode being laminated via the separator so that the positive electrode and the negative electrode are not brought into direct contact with each other (see fig. 3; col. 4, lines 34-43); an organic electrolyte (see col. 4, line 38); and at least a plurality of tabs (53/54) to

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be connected to each of the positive and negative electrodes for current collecting, the tabs having a total cross-sectional area so that the tabs may not fuse when at least 100 A current flows through the battery (see fig. 12). Regarding claim 2, Gauthier ('986) discloses a cross sectional area of $0.127 \text{ cm} \times 0.5 \text{ cm} = 0.0635 \text{ cm}^2$ and therefore within each of the claim ranges. Regarding claims 3 and 4, Gauthier ('986) discloses a thickness of a tab being not more than twice the thickness of an electrode active material layer (see col. 11, lines 15-38; col. 14, lines 50-55). Regarding claim 7, Gauthier ('986) discloses a lithium secondary battery comprising an internal electrode body including a positive electrode (55/68), a negative electrode (56/64), a separator (66), the positive electrode and the negative electrode being laminated via the separator so that the positive electrode and the negative electrode are not brought into direct contact with each other (see fig. 3; col. 4, lines 34-43); an organic electrolyte (see col. 4, line 38); and at least a plurality of tabs (53/54) to be connected to each of the positive and negative electrodes for current collecting, wherein the tabs function as current fuses (see col. 11, lines 15-38). Regarding claims 14 and 15, Gauthier ('986) discloses the tabs being substantially identical (see col. 11, lines 15-38). Regarding claims 18 and 19, the battery capacity is not less than 5 Ah (see col. 4, lines 24-27). Regarding claims 20 and 21, the battery is used for an electric vehicle (col. 3, lines 7-10).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 5-6, 8-13, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gauthier ('986). Regarding claims 5-6, Gauthier ('986) does not explicitly disclose the resistance values of the tabs, however it is considered that it would have been obvious to have made the tabs such that the sum of their resistances is less than 1 milliohm, to carry the disclosed currents. Regarding claims 8, and 12-13, it is considered that it would have been obvious to have optimized the cross sectional area of the tabs, as its dimensions are recognized as result dependent variables (see col. 11, lines 15-38). Regarding claim 9, a narrow portion of the tabs is provided (see col. 11, lines 15-38). Regarding claims 10 and 11, Gauthier ('986) does not explicitly disclose the internal resistance of a unit battery, however it is considered that it would have been obvious to one of ordinary skill in the art to have made the resistance less than 10 milliohms to prevent overheating of the battery. Regarding claims 16 and 17, it is quite unclear what is being claimed, however Gauthier ('986) discloses connection of tabs by welding (see col. 3, lines 27-31).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Sorkin whose telephone number is 703-308-1121. The examiner can normally be reached on 7:30 - 5:00 Mon.-Thur., Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 703-308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are 703-

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305-7718 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



David Sorkin

September 11, 2000



W. L. WALKER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700